COOKBOOK FOR SUSTAINABILITY INNOVATION: RECIPES FOR CO-CREATION

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In the spirit of creativity and innovation, we are happy to introduce our Cookbook for Sustainability Innovation: Recipes for Co-Creation. This Cookbook is a hands-on practitioner guide to the complex process of co-creation for sustainability. Based on a series of real life innovation cases among large companies, it offers a set of refreshing “co-creation recipes” with different stakeholder combinations.

Finding holistic solutions to sustainability challenges calls for collaboration with unusual stakeholders such as universities, civil society organisations, municipalities and end users. A new paradigm of open innovation and co-creation provides opportunities for integrating such stakeholders into new products, services and business models. To be successful, companies also need to adapt their internal environment and capabilities to enable the collaboration.

This Cookbook’s recipes are strategies for collaborative development of sustainability innovations, hand-picked from a pool of European cases of the 3-year international research project – EU-InnovatE. The aim is to showcase how successful companies integrate inputs from various stakeholders to the different stages of the innovation process. While there is not a single perfect co-creation recipe that fits all – our recipes are idea-provoking combinations of expansive or selective stakeholder networks, with collaborations throughout, or at early/late stages of innovation. Anyone can pick the one recipe that fits their “innovation kitchen” best, and modify it in the process.

We begin by presenting the “ingredients” for co-creation that, in substance, are the enabling factors for collaboration. They range from company culture, structure, capabilities and attitudes to external stimulus and input from different stakeholders.

The recipes highlight which ingredients (enablers) are essential, what are the key steps in the "cooking" of innovation, and what kinds of dishes/outcomes emerge. To give a taste of the recipe, we include the insights of the "cooks" – the innovation managers – in their own words.

Our own co-creation process of research and design has resulted in this Cookbook, offering valuable ideas in an inspiring, appetizing and refreshing format.

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1 EU-InnovatE stands for “End User Integration, Innovation & Entrepreneurship”:
http://eu-innovate.com/about/
CONTENTS

2 Introduction

5 Ingredients: Enablers for co-creation in sustainability innovation

9 Best recipes for co-creation in sustainability innovation

10 Early Stage Ideas and Experimentation
   Case: Rockwool

14 Late Stage Verification
   Case: EcoVeritas

18 Large-Scale Complex Co-Creation
   Case: BMW

22 Local Extensive Early Co-Creation
   Case: Skanska

26 Late Stage Outreach
   Case: Frosta

21 Conclusion

33 References and links
Know your guests

Include stakeholders when preparing the menu. Integrate your customers in the innovation process so you have a greater likelihood of innovating products and services that have a demand.
Ingredients

Our research highlighted some important organizational enablers for successful co-creation in innovation for sustainability. We explain these different enablers as a range of different ingredients for collaboration.
Trial and Error Culture
Nurture a trial-and-error culture within your company, you will soon notice how the appetite for innovating rockets!

Networking Competencies
Seek out or build networking competencies within your company or ask for external expertise: join research projects/consortia

Cross-Departmental Teams
Bring ideas and expertise from different areas of the organization to solve innovation challenges

Organizational Involvement
Involve several members of the organization personally in building collaboration with stakeholders for a higher sustainability outcome

Input from Unusual Stakeholders
Different and unusual stakeholders can provide insights and complement capabilities
Top Management Support
Innovative ideas often need the igniting push and support of top management to develop the innovation and to be open to collaboration with other stakeholders. Allay fears through communicating well with employees.

Intrapreneural Attitudes
Foster creativity and intrapreneurial attitudes among employees.

Feedback from Potential Users
Insights into user tastes can improve market acceptability.

Resources for Experimentation and Feedback
Provide employees access to experimentation space, hardware and software to explore and test ideas.
Fusion is the future. Be open to new ingredients and combinations

Collaborative innovation is becoming increasingly popular. Open up your sustainability innovation process to make use of stakeholders’ ideas, tastes and knowledge.
Our research shows that there are several “best recipes” for co-creating sustainable innovations together with stakeholders. In this section we offer a selection of best recipes and their ingredients which can be adapted according to taste.
EARLY STAGE IDEAS & EXPERIMENTATION

FUSION OF FLAVOURS:
MARINATED TOFU
ON A BED OF GREENS
Early stage co-creation with multiple and unusual stakeholders, making the later stages quick and smooth.

Method
This recipe builds on early collaboration with stakeholders and building strong ties with them at the ideation and development stages. Innovators pursuing this strategy opt to carefully scan for potential partnerships to build trusted and confidential relationships with selected collaborators. Such ties are built over time, which requires perseverance and patience in the innovation process.

Vignette: Rockwool
Type of innovation: product
Domain: housing

Danish construction material manufacturer, Rockwool, followed this recipe. The 2008 economic downturn made Rockwool, the biggest supplier of stone wool products in the world, realize it needed to find alternative applications of stone wool if it wanted to grow.
Enabling environment

To stimulate creative thinking about the use of stone wool fibers beyond insulation Rockwool introduced an R&D system called “under-the-radar”, allowing R&D staff to dedicate 10% of their time and budget to developing their ideas, without the need for managerial approval.

Collaboration with unusual stakeholders to generate ideas

The idea of using stone wool for building temporary living shelters was born in a conversation around the coffee-machine between Rockwool’s Prototype Coordinator and a manager from Orange Innovation, a sustainability-oriented non-profit for the development of humanism and culture. Talking about shelters for rock festivals they realized that compared to tents, stone wool would have several benefits. The material is fire resistant, protects from cold and heat and is more sound proof. In the process they realized that one of the possible outlets for the new shelters could be refugee camps creating a new social impact for the product.

Collaborating with users to develop and refine the concept

Orange Innovation further introduced Rockwool to the Roskilde Festival, where the shelter prototypes were tested. The large festival offered a similar context to refugee camps due to a high-density, non-permanent population. The shelters were tested with staff who pitched tents for renting, festival guests, and refugee organization representatives. The concept went through a round of iterations based on the stakeholders’ experiences and is now being tested in a refugee camp environment.
End result

- a functional and recyclable stone wool shelter made of replaceable modular elements
- a better quality living solution with improved safety and comfort for refugees and other temporary shelter seekers
- a new way of thinking about innovation at Rockwool
- co-creation led to cost and time savings in the development process

In their own words

"I tried to calculate how many months it would take us to get the feedback from 54 users of the shelters – now we get it in 10 days!"
People and Processes Manager, Rockwool

"We started to say: why don’t we use this as a kind of open innovation process? We don’t want to spend money and time doing this [product development] in a normal way... we want to use external resources for doing it!"
Vice-President of R&D, Rockwool
FISHERMAN’S FAVOURITE:
FILLET O’FISH WITH NEW POTATOES

LATE STAGE VERIFICATION
**LATE STAGE VERIFICATION**

Selective late stage collaboration between multiple staff members and selected stakeholders involving testing of the product or service.

**Method**

This recipe is based on the integration of a limited number of stakeholders that help to refine the product and which build strong ties with the company. This strategy can be characterized as a verification strategy in which stakeholder input collection is minimal in the early phase of the process. Rather the company fine tunes the innovation at later stages with the help of stakeholders, to ensure the eventual acceptability of the solution.

**Ingredients**

- **Feedback from potential users**
- **Top management support**
- **Input from unusual stakeholders**
- **Networking Competencies**
- **Organizational involvement**

**Vignette: Ecoveritas**

**Type of innovation:** product  
**Domain:** food

Ecoveritas is a medium-sized Spanish food retail company specializing in sourcing, distributing and selling organic food products. The company's CEO and the top management had concerns about how to reduce food waste. In response, Ecoveritas integrated three stakeholder groups during the development of their product innovation ‘Cuina Veritas’, which reduces waste by using fruits and vegetables that consumers reject. These raw materials are used in combination with newly designed recipes to make soups, sauces, broths and jams.
**1. Receptiveness to user feedback**

The original impetus for the innovation came from increasing complaints from customers about the level of waste generated by the stores and their dissatisfaction with an ecological and sustainable firm throwing food away. The company defined the solution and began to work on its development.

**2. Collaboration with unusual stakeholders**

Ecoveritas worked together with the Alicia Foundation, a private, non-profit foundation specialized in technological innovation in cuisine, to develop new and healthy recipes using the raw materials which were most frequently wasted. The 15 recipes were then tested with end users during workshops. In addition, the company collaborated with an organization called Grupo Sifo. This organization works with high-risk exclusion groups and worked as a mediator between Ecoveritas and the potential employees for the new operating plant which was built as part of the innovation.
End result

- A new range of healthy products reducing the company's food waste
- Inclusion of a social aspect by offering employment to groups at high risk of exclusion in the labour market
- Focused stakeholder integration helped with resource constraints
- More efficient value chain
- Development of strong ties with stakeholders through a careful stakeholder selection process

In their own words

"Reducing food waste is in the DNA and the essence of our company", “food waste is not the way you want to manage your company”, “it has always been a major concern for our top management and it is consistent with our values.”

Marketing & Communications Director

"We use the usual channels a company has. It is nothing new regarding what other companies would do trying to reach their clients”. What is important, is “the use you make of your channels”; “we do not use them as purely commercial tools, but rather with a more educational and interactive approach.”

Marketing & Communications Director
HEALTHY TWIST TO AN ALL-TIME CLASSIC: HEARTY VEGAN MEATLOAF

LARGE-SCALE COMPLEX CO-CREATION
LARGE-SCALE COMPLEX CO-CREATION

Broad committed collaboration, but making final tuning decisions alone. Top management or multiple staff members collaborate with many stakeholders throughout the earlier stages of the process but act alone at the final stage.

Method

This recipe shows how a high sustainability contribution and novel innovation can be achieved by integrating a large number of stakeholders early into the innovation process and having strong ties with these stakeholders.

Vignette: BMW

Type of innovation: product and services
Domain: mobility

BMW followed this strategy in the development of its BMWi3, the group's first mass produced electric car. It is noteworthy that BMW is a large company which is less restricted by resources in comparison to mid-size companies. The innovation process for this product and its surrounding services were large-scale and complex involving multiple stakeholders in different countries.

Ingredients

- Cross-departmental teams
- Networking Competencies
- Feedback from potential users
- Top management support
- Input from unusual stakeholders
- Resources for experimentation and feedback
1 STEP
**Involve stakeholders early on**
The electric car and mobility services development project at BMW went through intense stakeholder integration already at the early phase. After interviewing key mobility decision-makers at the launch of the project, the company held an idea contest called a Co-creation Lab on future mobility services to capture ideas on future mobility solutions.

2 STEP
**Use stakeholder expertise to evaluate ideas**
An innovation agency was used to evaluate ideas and select the ideas with most potential for further examination. Then ideas were brought to community idea development, where users gave a simple thumbs up or down for each idea. Eventually there were BMW internal workshops with third party experts from universities evaluating the most prominent ideas.

3 STEP
**Trial solutions in the field**
Trials were set up in several countries in order to better understand end user attitudes and to gain feedback on different usability and technical issues. Specific cases of long-distance driving were also studied. The trials were conducted and analysed in co-creation with municipalities, universities, research institutes and other specialist knowledge partnering organisations. The innovation process then shifted back to internal company development to reach the final product.
End result

- Successful launch of radical innovation in mobility, a low energy-use electric vehicle which reduces Co2 impact and which makes use of recycled materials
- Impact on lifestyle adaption towards sustainability
- Development of surrounding services
- BMW created strong ties with stakeholders and also maintained a large stakeholder network.

In their own words

"This contest has shown, once again, how important it is to interact with external sources to develop new services and innovations. The ideas generated gave new innovative input and value to this type of service that we are already working on and proved that BMW management is following the right direction. We look forward to further developing the ideas generated and to establish mobility services useful to the world of tomorrow."

BMW jury member of ideas contest at co-creation lab

"The agenda included the development of sustainable mobility concepts, new sales channels and marketing concepts, along with acquiring new customers. (...) I had the freedom to assemble a team the way I wanted. The project was not tied to one of the company's brands so it could tackle any problem. We were allowed to completely break away from the existing structures."

Project chief quoted in Automotive News 2013
LOCAL EXTENSIVE
EARLY CO-CREATION

MOUTHWATERING
PAELLA MEDLEY
LOCAL EXTENSIVE EARLY CO-CREATION

Extensive early stage collaboration, with final decision made internally. Organizational involvement with many stakeholders at the earlier stages of the innovation process but act alone at the final stage.

Method

This recipe provides an example of a local level collaboration with a number of different stakeholders, particularly end users who were integrated early in the innovation process. Strong ties were built between the company and the stakeholders while company experts made the final decisions.

Vignette: Skanska

Type of innovation: product
Domain: living

Skanska is an international construction company. They wanted to make home ownership a reality for lower income households and collaborated with a range of different stakeholders to create functional, eco-efficient housing units.

Ingredients

- Feedback from potential users
- Organizational involvement
- Trial and error culture
- Networking Competencies
- Top management support
1

Early ideas from users

Having identified the need for affordable housing, the company undertook a survey of potential residents and collaborated with a local university to discuss the issue further with other potential users and stakeholders.

2

Specialist proposal tested

Based on the data gathered through the interaction and collaboration with end users and other stakeholders, Skanska worked with architects to create floor plans and partnered with IKEA to identify storage and furniture solutions for affordable homes. The floor plans were discussed in detail with end users in focus groups which generated numerous suggestions and ideas. Skanska also collaborated with the municipality to identify the ideal plots for construction.

3

Proposal fine-tuned by internal designers

Having gathered the insights from the users and other stakeholders, the floor plans were then fine-tuned by designers to create the final product.
End result

- Highly functional and affordable housing units for customers of average income
- Efficient heating and energy use and creating minimal waste during construction
- Communal spaces to promote social interaction and community

In their own words

“I think this is one of the key success factors that we had all the different stakeholders around the same table early on.”

Business Development Manager, Skanska

“So it was not just about technical issues and estimation and construction or structural things, it was also this consumer side that we focused on. And I think that was our strength, that we had both of these on board.”

Business Development Manager, Skanska
COLORFUL SUSHI ADVENTURE:
BEETROOT & CUCUMBER ROLL
LATE STAGE OUTREACH

Limited collaboration but making additions at the late stage to educate on the innovation and smooth commercialization.

Method

This recipe suggests that a contribution can be made to sustainability without the need for complex integration of stakeholders. Rather, adding stakeholders at the commercialization stage can help to educate consumers about sustainable lifestyles and smooth the arrival of the product or service into the market.

Ingredients

- Feedback from potential users
- Input from unusual stakeholders
- Networking Competencies
- Organizational involvement

Vignette: Frosta

Type of innovation: product
Domain: food

Frosta is a large European frozen food producer. The Polish branch of the company identified an interest among potential consumers for additive-free frozen food and worked with different stakeholders to develop additive-free recipes for frozen fish meals. Frosta also collaborated with different stakeholders to create a health awareness campaign and educate the public on harmful food additives.
Feedback from end users in development

Frosta, worked with a research agency at the development stage to better understand the interests of its end users in additive-free frozen food. Based on survey results they innovated new recipes and got feedback through their blog and through testing the recipes with different stakeholders at workshops with food specialists.

Collaborative commercialization through education

What is characteristic about this recipe is that an important part of their collaboration happened at the late stage of commercialization. They worked with university students to present their initiative to the media and collaborated with them to run educational events to explain nutrition in local stores and shopping centres. They also worked with a non-profit organization to launch an educational consumer campaign and with public authorities to create a dictionary of food additives to extend consumer awareness.
End result

- Additive-free frozen fish ready meals
- Societal learning about nutrition and sustainability
- Strong educational component
- Market acceptance for sustainable products in the context of an Eastern European country

In their own words

"A lot of people came to obtain this knowledge; they asked questions, they were interested, too, not only inquiring about our products, but about how to translate this into everyday life, what they should check; it seems to me that this need does exist."
Marketing Director, Frosta

"The students helped us very much, working, serving the stand, we have educated them partially, because they are food technology students, and they were very knowledgeable, so then they were significant support too; subsequently they were the frontier while meeting the consumers."
Marketing Director, Frosta
Don’t serve marzipan to guests with nut allergies

While we recommend collaboration, not all stakeholders can collaborate.
CONCLUSION

The recipes presented in our *Cookbook* are not an exhaustive list of collaboration strategies. As sustainability becomes an increasingly important part of how companies operate, radically new solutions and ways of collaborating emerge enabled by the social media, digitalization and active citizen attitudes.

Our recipes are an attempt to illustrate and inspire co-creation in multiple ways. They tell the innovation stories of the companies, their learnings, experiences of forming new ties and relationships, and the outcomes of "cooking together".

More than ever, the pace of today requires companies to embrace the “fail fast” attitude in order to push the innovations quickly out into the world. Innovating together in networks is not only more inspiring, but also helps to manage the risks and create safety nets that facilitate moving forward.

Cooking together often results in mutual learning, trusting partnerships for the future, and valuable experiences for tackling the complexity of sustainability solutions. This helps the companies to develop internally, more consciously reach out for missing competences, and approach the innovation process with renewed energy, confidence and skills.
No-one became a chef by reading cookbooks, go do it!

Instructions are useful, but you learn to innovate only by doing. Just start!
REFERENCES AND LINKS


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